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Behind the Rise in Jobless Pay

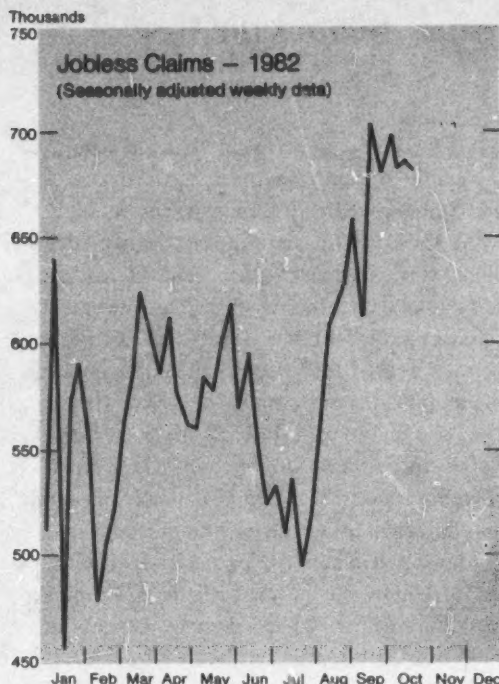
INITIAL claims for unemployment insurance soared by about a third between late July and mid-September, reaching a record 703,000. Since then, claims have hovered only slightly below that peak level. Such evidence of intensifying labor market distress has undermined confidence that the recession is ending and has stirred concern that rising joblessness could be signaling a further slump.

How reliable an economic indicator has the claims series been in the past? And what—if anything—does the sharp rise in claims imply for the economy in the months ahead?

The initial claims series measures the number of claims filed each week by unemployed workers seeking jobless benefits under state administered programs. Reported by the Labor Department with less than a two week lag, claims data are prompt and sensitive barometers of changes in economic activity. Several weeks of claims statistics become available in advance of such monthly readings as industrial production and personal income.

Weekly claims data need to be interpreted cautiously. The main reason: volatility in the series. Weekly readings can fluctuate widely—reflecting a tapering off or bunching up of claims filings because of holiday patterns and other problems not fully taken account of by seasonal adjustment, weather conditions, and eligibility changes. The frequent jiggles in the series persist, although somewhat muted; even in monthly average data.

Despite the short-run volatility, the underlying trend in jobless claims has tracked the path of economic activity quite well through the years. As illustrated in the chart at lower



right, a significant increase in the level of initial claims in the past has been accompanied by economic weakness or stagnation.*

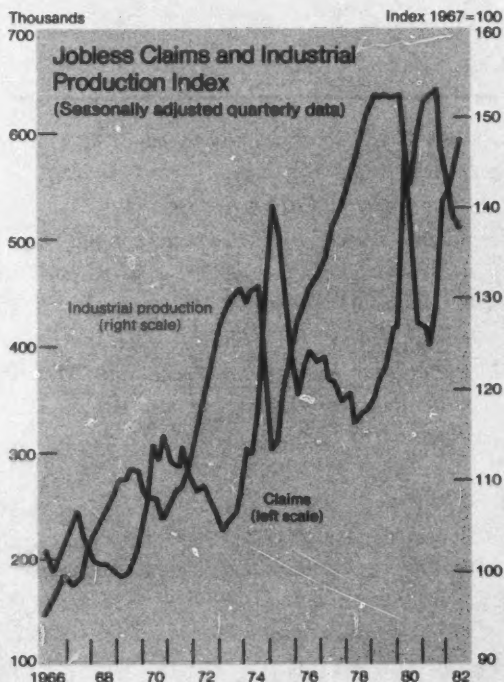
Over the past year, claims have provided early and essentially accurate evidence of the various stages through which the latest recession has passed. Claims moved into a decided uptrend in the summer of 1981, reflecting the onset of recession. They continued to mount last fall, then plateaued for several months—accurately reflecting a soggy economy. In June and early July of this year, claims declined at a time when other evidence also seemed to sug-

*In assessing the performance of various indicators at economic turning points, the Commerce Department has rated initial claims as tending to coincide with cyclical troughs and to lead cyclical peaks. On the basis of its overall cyclical performance, the claims series was, however, recently included in the index of leading indicators—replacing the layoff rate, which is no longer available.

gest that the economy might be stabilizing or even starting to revive.

More recently, however, claims have risen sharply, suggesting that the economy continues to flounder. Significantly, the increase in claims between July and October—about a third—is large by historical standards. In fact, claims have risen this rapidly only four times in the past two decades, and each of those rises was associated with the start of a recession. Too much weight should not be given to a single index, however, and other economic indicators are painting a less gloomy picture. For example, the composite index of leading indicators rose in September and has increased in five of the last six months.

One explanation of the different story being told by initial claims and other indicators is that labor markets (and thus initial claims)



are significantly weaker than production and sales. Recent employment figures lend some support to this notion. The rate of contraction in payroll employment has actually speeded up in recent months. Employment in the third quarter fell at a 3.3% annual pace as against an average rate of decline of only 2% in the previous three quarters. Thus the decline in payroll employment has accelerated despite the fact that real GNP has stabilized and even grown somewhat in the past two quarters. Such a divergence could well reflect unusually strong efforts on the part of managements to improve the efficiency of their operations—efforts necessitated by concerns over profits and facilitated by a more flexible position on work-rule issues by labor. The result of such efforts would, of course, be an improvement in productivity in the private nonfarm economy, which, indeed,

rose at a 3.6% annual rate in the third quarter.

If this explanation is correct, the recent rise in initial claims suggests that labor markets continue to weaken, and, thus, that the decline in employment and rise in unemployment may still have some way to go.* For the general economy, however, the rise in claims is probably not signaling the start of another downturn, given the lack of support from other data such as the leading indicators. However, it does suggest that a solid recovery remains elusive. And given the likely continued drag of falling employment, it raises doubts as to whether the preconditions for such a recovery are yet in place.

*The recession's impact on unemployment comes on top of a rise in structural joblessness—brought on by a secular decline in this country's basic industries. That decline was analyzed in "Behind the Slump in Capital Investment," *The Morgan Guaranty Survey*, August 1982.

Economy Watch

THE economic landscape is littered with conflicting signals. Stock and bond markets have rallied impressively in recent weeks. As a result, the rise in consumer net worth since July has amounted to more than \$300 billion—a strong plus for consumer confidence and potential demand. At the same time, the employment situation continues to depress income and to act as a negative influence on consumer attitudes. The number of workers on nonfarm payrolls contracted again in October, bringing the decline in employment since June to nearly a million. The jobless rate keeps climbing.

Given such mixed signals, there is no basis for a confident forecast of what will happen during the critical Christmas selling period. The

disappointing performance of sales in auto showrooms and in retail chain stores in October does not augur well for a strong consumer buying mood.

The continued easing of interest rates already has begun to yield positive effects in housing. Sales of new single-family homes in September, for instance, rose 24% above the month-earlier pace. And housing starts this past quarter reached a pace almost 30% above that of the fourth quarter of last year. Some of that rise reflects stepped-up funding for federally subsidized apartments, but private housing apparently is drawing strength from the decline in mortgage rates, which on new commitments had fallen to about 14% nationwide late last month—

Economic Projections

(Percent change at annual rate from previous quarter, except where noted)

	1982.....			1983.....	
	Q2	Q3	Q4	Q1	Q2
Real GNP	2.1	0.8	0.5	2.5	3.7
Real consumer spending	2.5	1.4	2.8	3.0	4.3
Real business-capital outlays	-11.8	-13.0	-11.8	-4.9	4.7
GNP deflator	4.6	5.4	5.5	5.1	4.7
Consumer prices	4.6	7.6	1.7	4.0	5.8
Real disposable personal income	3.1	2.3	-1.0	2.2	0.6
Saving rate (%)	6.7	6.9	6.1	5.9	5.1
Housing starts (Millions)	1.0	1.1	1.2	1.4	1.5
Auto sales (Millions)	7.5	7.7	8.0	8.4	9.0
Unemployment rate (%)	9.5	9.9	10.4	10.5	10.6

NOTE: 1982 Q2 and Q3 data are actual.

three percentage points below the July readings.

The upswing in housing will help bolster output in the current quarter. However, there are several counterweights: the continuing weakness in business spending on plant and equipment; the continuing decline in state and local purchases; a deteriorating trade balance; and the prospect of further cuts in business inventories.

Against that background, the forecast of The Morgan Bank continues to show sluggishness in economic activity in the near term.

Interest paradox

As already noted in the case of housing, the drop in interest rates will act as a stimulant for

interest-sensitive industries. Paradoxically, however, the drop in rates could have some negative aspects. Often overlooked is the major impact that rising rates exerted on personal income. In 1981, for example, personal interest income rose by \$66 billion. This year the increase will amount to \$46 billion. Over the next four quarters, assuming continued moderate easing in interest rates, personal interest income will decline by \$5 billion.

Meanwhile, the federal government will be a major beneficiary of a sustained reduction in interest rates. In The Morgan Bank forecast, interest payments by the federal government show no rise over the next four quarters as lower rates offset the continuing increase in the amount of federal debt outstanding. That trend, together with improved prospects for corporate tax receipts in 1983 (reflecting the beneficial effects of lower interest rates on corporate profits), should help to keep the deficit in the unified federal budget to about \$150 billion—significantly less than some analysts have forecast.

Finally, the dramatic decline in inflation shows no sign of reversing. Indeed, the consumer price index (CPI) should rise little, if at all, between now and the end of the year. This would produce a December 1981-to-December 1982 increase of less than 4%—the smallest twelve-month gain since 1972.

The July 1983 cost-of-living increase in Social Security benefits, which is calculated from the first-quarter-to-first-quarter increase in the CPI for Urban Wage and Salary Workers, will certainly be the smallest since cost-of-living escalation was first paid in 1975. In fact, there is a chance that this CPI calculation could fall below 3%. If this were to happen, no cost-of-living increase in Social Security benefits would occur in 1983.

Monetary Policy in Transition

The following article is an adaptation of remarks by Milton W. Hudson, Senior Vice President, Morgan Guaranty Trust Company, before the annual meeting of the American Bankers Association in Atlanta on October 20, 1982.

ASSESSING the current economic situation certainly is challenging. A few glimmers of brightening have appeared, most notably in housing and in financial markets. But those favorable signs coexist with a continuing weak employment situation and with inventory levels that still look excessive in many industries. While one can have some confidence that the worst of the recession is past, there is still abundant reason for concern that a decisive recovery pattern will be slow to emerge.

What's perhaps most critical of all is that interest rates—even though down dramatically from their early summer peaks—remain formidably high. There simply is no modern precedent in a recession for the real interest burden that continues to exist. At the recent Federal funds level of 9% to 10%, the implied inflation-adjusted rate of interest for basic, benchmark money (from which almost everything else in the private economy gets scaled up) has been 3% to 5%. Normally in a recession, real rates—similarly measured—are either negligible or negative. At the comparable stage of the 1974-75 recession, the real funds rate had fallen to a negative reading of several percentage points (chart on page 6).

How long economic malaise persists is likely to turn mainly on how financial conditions evolve from this point on. Policy—both monetary and fiscal—is critical.

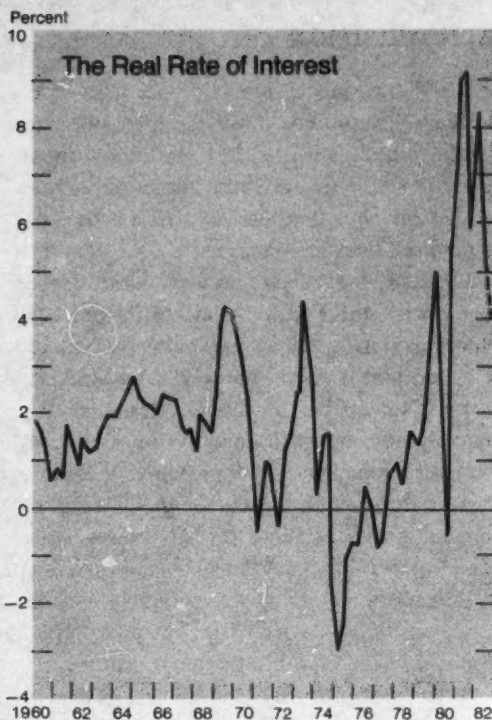
Special events—the maturing of billions of dollars of All Savers Certificates and the au-

thorization of money-fund type accounts at depository institutions—have recently presented the Federal Reserve with a fortuitous opportunity to unloose itself from the constraints of M1. My hope is that the Fed will not be quick to put itself back in bondage.

I assure you this sentiment doesn't mean that I want the Fed to revert to its pre-1979 preoccupation with a fine-tuning of interest rates or that I think the Fed's anti-inflation concern should be substantially lessened. Presumably no thoughtful analyst wishes either of those developments. And presumably there is also pretty general acceptance of the fact that something like the focus on M1—however perverse its workings may have been on occasion in the past three years—was probably a necessary transitional device to get monetary policy resolutely fixed on a disinflationary course.

But even granting those points, it has become progressively more evident that the focus on M1 is grievously flawed—not just under present circumstances but inherently. M1 targeting implicitly assumes that there is a reasonably stable relationship between the amount of money people and business want to hold and the dollar total of transactions conducted in the economy. But that simply isn't true in the real world of revolutionary change in cash-management procedures and alternating waves of pessimism and optimism that affect people's attitudes toward holding money for precautionary reasons. No one, however knowledgeable, can reasonably be expected to anticipate correctly the frequent upward and downward shifts in the public's holdings of money relative to transactions.

What this means is that if Fed policy focuses on money supply alone—on simply achieving constant growth in measured money balances



NOTE: Federal funds rate minus percent change from previous year in personal consumption deflator; quarterly plottings. Last plotting shown is an estimate of the current real rate.

—it inevitably is going to produce conditions of unintended money ease at times when people opt to hold less money relative to transactions, and conditions of unintended monetary restraint when people's money demands shift higher. With the benefit of hindsight, there is good reason to think that money-supply targets were unintentionally too generous in the mid-1970s, when especially rapid financial innovations enabled people to minimize cash balances (box on page 7), and unintentionally too restrictive over much of the past year.

Looking back to the winter of 1981-82, it now seems clear that the Fed was ill-advised to have battled as aggressively as it did against the

accelerated money growth that occurred. Ironically, demand deposits, while volatile from month to month, were essentially flat through the winter, and currency did not grow with any special strength.

What did cause total M1 to spiral so sharply was an explosive quickening in growth of interest-bearing checkable accounts other than demand deposits.* Because that occurred in the depths of recession—with transaction needs for money lessening and with clearly mounting public apprehension about job security and financial strain—the inference is reasonable that last winter's bulge in M1 represented essentially a defensive buildup of precautionary balances. And that hypothesis is strengthened by the fact that growth in ordinary savings accounts accelerated at the same time. People, it would seem, were adding to money holdings for peace of mind, not because they were getting primed for a spending binge.

The Fed, understandably, was unable at the time to make a confident assessment of people's motives for adding to cash holdings. Still it reacted to the bulge in M1 by tightening its reserve posture significantly and driving the funds rate from a winter low of 12% to almost 16% by mid-February. The funds rate then held high throughout the first half of 1982—a fact that unquestionably goes a long way toward explaining the prolongation and deepening of recession. Intuitively, one senses that there must be a serious built-in deficiency in a set of arrangements that can produce that kind of perversity—a rise of almost 400 basis points in the benchmark cost of money at a time when un-

(Continued on page 8)

*Between October 1981 and February 1982, M1 rose by \$14.4 billion, or at an annual rate of 10.3%. About 85% of the \$14.4-billion rise was accounted for by growth in checkable accounts other than demand deposits.

DIFFICULTIES IN INTERPRETATION

THE mid-1970s provide a clear illustration of how financial innovation can make it difficult to interpret the behavior of the monetary aggregates. Interest rates rose to new records during 1973 and 1974, spurring both the public and business firms to make new efforts to minimize their holdings of nonearning deposits. Companies used such devices as lock boxes and remote disbursements* and also developed better deposit information systems—enabling them to reduce significantly the volume of demand deposits needed to support payments activity. The result, starting in the second half of 1974, was that actual monetary holdings rose far less rapidly than would have been expected on the basis of historic relationships between money, economic activity, and interest rates. Indeed, according to a study by several economists at the Federal Reserve Board,† the growth of M1‡ from mid-1974 to the first quarter of 1977 averaged 3.5 percentage points lower than historic relationships

*Lock boxes are simply post-office boxes close to a firm's customers and their banks. They enable businesses to collect more quickly the checks their customers send them.

Remote disbursement involves writing checks on an account established at a bank that is far from any office of a Federal Reserve Bank, delaying the process of check collection. The Fed took action in 1979 to curb remote disbursement, because it had become increasingly widespread during the mid-1970s and was raising Federal Reserve "float," which the Fed was under pressure to curb.

†Richard D. Porter, Thomas D. Simpson, and Eileen Mauskopf, "Financial Innovation and the Monetary Aggregates," *Brookings Papers on Economic Activity*, 1:1979.

‡The study was conducted in terms of the M1 concept actually used in the mid-1970s, which included only currency and demand deposits. In 1980, the M1 aggregate was revised to include travelers' checks and other checkable deposits.

Money Supply: Actual vs. Predicted

(Billions of dollars)

	Actual	Predicted	Error	Percentage error
1974:3	279.0	284.0	-5.0	-1.8
4	282.1	290.1	-8.0	-2.8
1975:1	283.6	296.3	-12.6	-4.5
2	287.7	302.9	-15.2	-5.3
3	292.9	309.9	-16.9	-5.8
4	295.1	317.0	-21.9	-7.4
1976:1	298.5	324.6	-26.1	-8.8
2	303.3	331.6	-28.3	-9.3
3	306.5	338.1	-31.6	-10.3
4	312.1	344.8	-32.7	-10.5
1977:1	317.9	352.2	-34.3	-10.8

would have suggested was likely. This led to a cumulative shortfall from the historic norm of \$34 billion by the first quarter of 1977 (accompanying table).

These changes in the public's demand for money (which no analyst fully perceived on a contemporaneous basis) seem to go a considerable distance toward explaining why the Fed waited until the spring of 1977—two full years into the economic recovery—before it moved to constrain monetary growth. Although the economy grew handily—at a 5.5% annual rate—from the trough of the recession to the first quarter of 1977, observed money growth did not seem excessive. Only after the fact did it become apparent that the relationship between money and economic activity had changed.

employment was approaching 10 million and still rising.

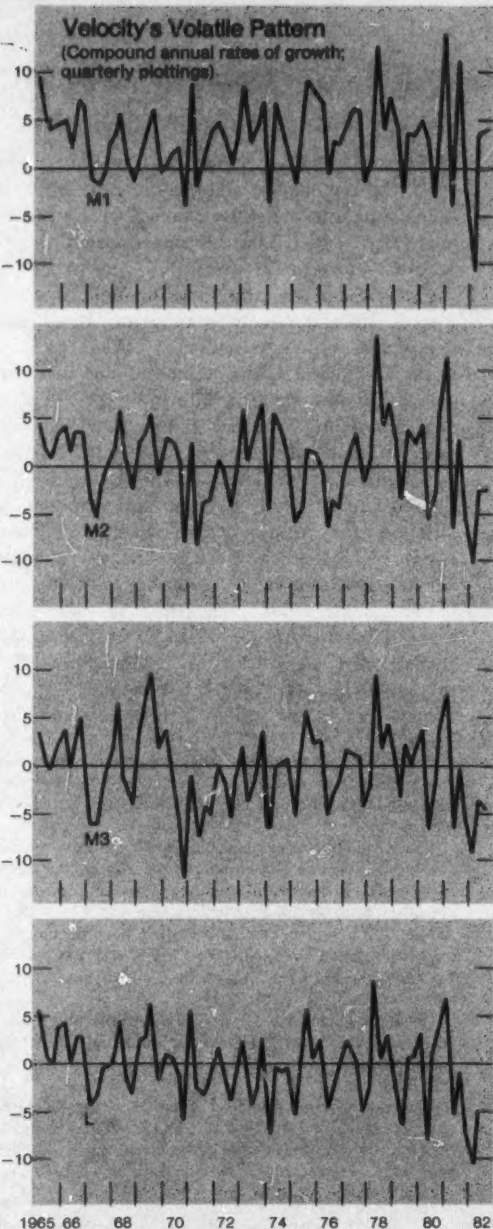
That episode last winter—probably because it was so perverse—seems to have marked a turning point in the evolution of the Fed's operating technique. Fed actions ever since have testified to growing official disenchantment with rigid adherence to an aggregates policy. There has been a rising tolerance throughout the year of target overshoots, culminating in the Fed's recent decision to attach much less than the usual weight to movements in M1—at least for the time being.

"The time being" is likely to prove of extended duration. That's because there is no reason to assume either that the whirlwind of financial innovation is about to end or that people's money-demand inclinations are suddenly going to become stable. At the very least, the broader monetary aggregates, M2 and M3, are likely to get permanently increased attention. That seems likely since a lot of the distorting influences that batter M1 merely involve shifts among M2 and M3 components, leaving total M2 and total M3 unchanged. But the amount of M2 and M3 (and even L*) that people and business want to hold relative to the economic transactions they conduct does change significantly (accompanying chart). As a consequence, there needs to be further consideration of how the Fed's operating techniques can be improved.

Getting frozen into the use of any single financial aggregate whose targeted growth rate is changed infrequently would simply perpetuate vulnerability. And—what's by no means inconsequential—becoming frozen that way is

*L is the broadest aggregate. It captures the public's demand for instruments issued by financial institutions and those issued by nonfinancial sources and is a measure of liquidity in the system.

Percent



NOTE: Velocity is the ratio of nominal gross national product to each financial aggregate.

certainly not what either the spirit or the letter of the Humphrey-Hawkins Act provided. That statute specifically contemplates the exercise of judgment through revision of money and credit targets under changing conditions; it also explicitly requires that money and credit targets be established in the light of "past and prospective developments in employment, unemployment, production, real income, productivity, international trade and payments, and prices."

For a while, when inflation looked so intractable and the Fed had good reason to worry that anything less than a substantial tilt toward disinflation would exacerbate inflationary expectations, a very tough monetary-growth posture was appropriate. But it is certainly less so now. A really remarkable abatement of inflationary pressures has occurred, affecting basic wage trends as well as prices. In the context of what amounts to serious worldwide recession—marked by substantial unutilized labor and plant resources—an early reversal of price and wage deceleration looks improbable.

The Fed has had a concrete demonstration in the past several months that investors are less fearful of signs of monetary accommodation than might have been supposed. As short rates tumbled through the summer months, investors—far from turning skittish and worried—reached out and aggressively bought intermediate- and longer-term debt issues. Market participants have been acknowledging, in effect, the appropriateness of a shift in monetary-policy emphasis toward nurturing economic recovery.

Thus, the gradual evolution in policy that Paul Volcker and his associates have been engineering pretty much all year—adopting a more flexible, less rigidly mechanistic strategy—is one that deserves applause and encouragement. It affords latitude, within the context of continuing concern with undernourishing inflation, for

a meaningful response to the very soft economic conditions that currently exist.

Fiscal imperatives

Fiscal policy has a companion role to play—a crucial one—in helping effect a transition to a permanently improved economic environment. Most important, there needs to be some early follow-through to the pragmatic turn in fiscal policy that occurred earlier this year when President Reagan worked so hard to achieve a revenue increase to help reduce the structural budget deficit. That action was of great symbolic significance because, up to that time, financial-market participants could see no movement at all toward assuring that the Treasury would not permanently preempt an inordinate share of national savings.

Markets are fickle, however, and it is entirely possible that there could be a reappearance of unease early next year when the new budget is presented and people again focus on deficit numbers for both fiscal 1983 and fiscal 1984 that are bound to seem horrendously large. At The Morgan Bank, our working estimate of the 1983 budget deficit, for instance, is close to that of the Congressional Budget Office: roughly \$150 billion.

Big as that number is, however, a great deal of it simply reflects the depressed state of the economy. If the economy, for instance, were to get back to an unemployment rate of 7% (roughly the level that prevailed before the onset of the current recession), something like \$90 billion of the deficit would melt away, leaving a residual of about \$60 billion. That's still a big number, but at least it's one that doesn't seem hopelessly beyond attack. And, of course, no reasonable analyst is looking for a corrective package of fiscal actions large

enough to eliminate the underlying structural budget deficit overnight. That in fact would be of very questionable wisdom in the context of today's weak economic situation.

Budget equilibrium

What seems important now is a fresh demonstration that a credible plan is being devised that will carry us progressively toward budget equilibrium as recovery develops in the private economy. Early Congressional action to put Social Security finances on a sound footing could yield an enormous psychological divi-

dend. So too would a change in the escalator provisions in other entitlement programs.

The chances of actually witnessing an appropriate policy evolution over the near term—both fiscal and monetary—seem increasingly good. That, ironically, is partly because the conditions we face—both of economic malaise and financial strain—are sufficiently worrisome to focus attention on imperatives. It's unambiguously clear now that we need policies that will foster a resumption of significant income growth without regenerating worries that future troubles are being spawned. Stark necessity is helping us toward just such policies.

Recession/Recovery: An Early-Warning System

The following article was written by Geoffrey H. Moore, Director, Center for International Business Cycle Research, Rutgers University.

IN July, a new system of early-warning and confirming signals of recession and recovery registered its first, or preliminary, indication of recovery. The intermediate and final signals, which are usually spread out over several months, have not yet been registered. The signals are based upon growth rates in the leading and coincident indexes published by the Department of Commerce. The potential uses of the system extend well beyond its primary objective of tracking the economy. They include the appropriate timing of private investment decisions and of government policies to combat recession and inflation.

The system is not foolproof, but it does have some built-in safeguards against error. The full details of the method and its historical record were published in January 1982.* What follows summarizes the method, tells what the signals have been saying lately, and suggests how they may be used.

Sequential signals

The National Bureau of Economic Research has established a widely used chronology of business cycle peaks and troughs. The latest peak came in July 1981, and this is commonly accepted as the starting date for the current recession. The Department of Commerce publishes a "coincident index," so-called because its highs and lows have roughly coincided with

the business cycle turns. It includes four components: industrial production, nonfarm employment, real personal income, and total business sales in constant prices. The four components have trended upward over the years—at an average growth rate between 1948 and 1979 of 3.3% per year. This figure gives us one criterion upon which to base the signal system, since the index has generally risen faster than this during business cycle expansions but has slowed at the approach of a recession.

The Commerce Department's leading index reaches its turning points in advance of those in the business cycle as well as in the coincident index. It has twelve components, all of which either represent actions taken in anticipation of changes in production, employment, income, or sales, or factors that influence such actions. The volume of contracts and orders placed for plant and equipment is an example of the first type, while the level of stock prices is an example of the second. The index also is constructed in such a way that its long-run growth rate is 3.3% per year, and it too has risen faster than that in recoveries, more slowly when a recession lies ahead.

Both these indexes have declined during every one of the eight recessions since 1948 and have seldom undergone sustained declines at other times. The leading index did decline on two occasions when no recession ensued, in 1950-51 and 1966, but then the coincident index merely hesitated a bit. One is well advised, therefore, to look at both indexes rather than just the leading index alone. Both indexes are also relatively free of erratic movements, at least as compared with their individual components. But they are not perfectly smooth, and the first figures to be published are also

*Victor Zarnowitz and Geoffrey H. Moore, "Sequential Signals of Recession and Recovery," *Journal of Business*, University of Chicago, Vol. 35, No. 1, 1982.

subject to revision. Hence one must allow for the possibility of frequent reversals.

Bearing these considerations in mind, we first convert the indexes into growth rates, using a special formula to do so. The rate is calculated by obtaining the ratio of the current month's index to the average level of the index for the twelve preceding months, and expressing the result as an annual percentage rate. The advantage of this method, as compared with the ordinary month-to-month change, is that a twelve-month average as the base is less subject to erratic movements than any single month.

During a recession we would expect these growth rates to be negative, since the indexes themselves decline. During recoveries they should be positive. The points at which they turn positive may therefore signal a recovery. At the same time, because of erratic movements or revisions, the growth rate may turn negative again. To meet this problem we adopt two rules. One is that the growth rate must not just go above zero but must go above 1% to be counted as positive. The other is that once this happens any retrogression to a lower rate is not counted as a reversal of the signal unless it goes below -1%.

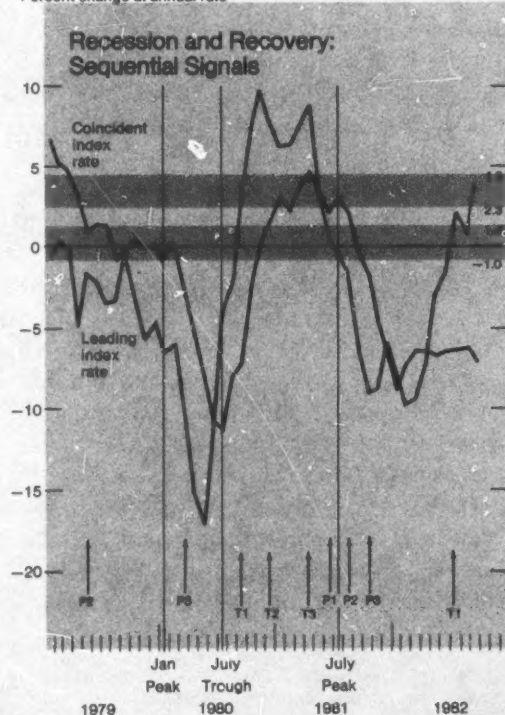
Because the leading index is expected to turn first, the initial signal is based upon it. In July 1982 the leading index growth rate, having been negative for twelve consecutive months, turned positive, with a rate of 1.9% when first reported. This, then, was the first signal of recovery. A month later, when the August figure was released, the growth rate was 0.7% but this is not counted as a reversal, for the reasons noted above. The September figure came in at 3.9%, substantially reinforcing the initial recovery signal.

The second signal of recovery hinges on a faster advance of the leading index and an up-

turn in the coincident index. That is, the leading growth rate must exceed 4.3% (one percentage point above the 3.3% trend rate) and the coincident rate must exceed 1.0%. As of September, the coincident rate was -7.1%, so both indexes have some way to go before they reach the mark. The third signal is still farther off. It requires a 4.3% growth rate in both indexes. The same rule about reversals applies throughout.

Signals of the onset of recession are defined similarly. The accompanying diagram puts the whole system together. The growth rates must pass through two bands, one around the 3.3% trend rate, the other around zero. The width of the band, $\pm 1.0\%$, is the same in both

Percent change at annual rate



Three Signals of Recovery: Timing at Business Cycle Troughs

<i>Business cycle trough</i>	<i>T1 First signal</i>	<i>T2 Second signal</i>	<i>T3 Third signal</i>
10/49	8/49	1/50	3/50
5/54	5/54	11/54	12/54
4/58	6/58	10/58	11/58
2/61	3/61	6/61	8/61
11/70	11/70	5/71	12/71
3/75	6/75	9/75	11/75
7/80	9/80	12/80	4/81
.....	7/82		
Average lead (-) or lag (+), in months	+1	+5	+8

cases. The three signals of peaks are designated P1, P2, and P3 while the trough signals are T1, T2, and T3.

Looking at the record

How do the signal dates compare with the National Bureau's peak and trough dates? The tables list them all and from them one can tell how far the signals led (-) or lagged behind (+). At troughs, T1 has always occurred within three months of the turn, but seldom before it. T2 has usually occurred five or six months after the turn, and T3 about six to eight months after. There have been no false signals of recovery, although it must be conceded that most of the record is based on the revised data now available, not on the preliminary data that would be used in practice.

At peaks, the P1 signal has always occurred before the peak date, but in three instances (out of ten) the signal proved false: no recession

ensued, only a slowdown. P2 occurred sometimes before and sometimes a month or two after the peak, while P3 fell within the range of one to five months after the peak. Two of the three false signals were ruled out by P2, and all three by P3.

Hence the system has given earlier warnings of recessions than of recoveries. For some purposes the tardiness in signaling recovery may not be troublesome, because at the beginning of a recovery the level of economic activity is low, albeit increasing. Moreover, judging from the record, the use of the first two signals of recovery may yield sufficiently reliable results, reducing the lag by a month or two.

The signals were designed originally to improve the countercyclical timing of federal programs for public works or public service employment. Most such programs have been adopted long after the recession they were in-

Three Signals of Recession: Timing at Business Cycle Peaks

<i>Business cycle peak</i>	<i>P1 First signal</i>	<i>P2 Second signal</i>	<i>P3 Third signal</i>
No peak	3/51	7/51	
7/53	6/53	8/53	9/53
8/57	1/56	7/56	9/57
4/60	9/59	6/60	9/60
No peak	5/62		
No peak	6/66		
12/69	6/69	11/69	4/70
11/73	8/73	1/74	3/74
1/80	11/78	5/79	3/80
7/81	6/81	8/81	10/81
Average lead (-) or lag (+), in months	-7	-2	+3

tended to mitigate had begun and were continued long after the recessionary need for them had disappeared. Such delays not only reduce the effectiveness of the programs in countering recession but also contribute to the inflationary pressures that build up during a business cycle expansion.

Since programs of this sort require months of advance preparation and can be initiated and terminated in stages, our signals can provide timely indications of when to start and stop, and when to build up as well as when to curtail. The statistical record of the signals shows an extraordinarily close relation to the unemployment rate on the one hand and to the inflation rate on the other, throughout the period from 1949 to 1980. Every interval from P3 to T3 was characterized by a rise in unemployment and a decline in inflation, while every interval from T3 to P3 was marked by declining unemployment and rising inflation. There is strong evidence, therefore, that the signal system could form the backbone of a truly countercyclical policy, whether applied to public works or other policies.

For any industry or company whose fortunes depend heavily on the business cycle, the signals may prove helpful guides to the most appropriate timing of decisions to expand or cut back, speed up or postpone. Careful study of the historical record in each case is, of course, essential to the intelligent use of these tools. One example of a test of this sort, conducted at the Rutgers Center, concerned the movement of stock prices. Could the signals be used to fix optimal times to buy and sell, and with what result? The test indicated that they could, with an average annual rate of capital gain in the broad stock price indexes of about 25% during holding periods identified by the signals. The

recent market upswing, incidentally, has been consistent with this historical record.

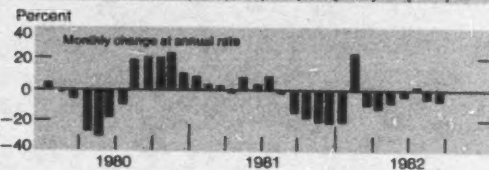
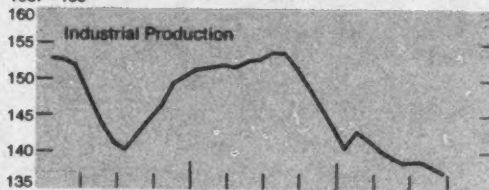
Employment-oriented signals

In view of the enormous importance attached to employment and unemployment in evaluating the economy's performance, and hence the potential value of a signal system directly tied to this area, some experimental work has been done on leading and coincident employment indexes and signals derived therefrom. The employment indexes have some additional virtues. Because all of their components (five for each index) are available within a week or so after the end of the month to which they refer, the indexes are available about three weeks before the Commerce Department's indexes and avoid one of the major sources of revision: missing components. Furthermore, since many labor market series are also available by states, the system can be applied at the state level as well as the national.

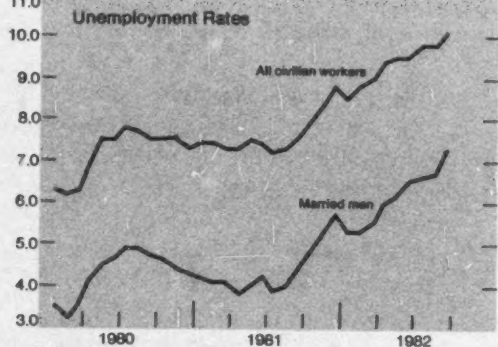
The results with the employment indexes are about the same as those we have already described, although the employment-related signals have often come a month or two later. In July the leading employment index registered an initial recovery signal, the same month that was picked by the Commerce Department's index. By September, however, the leading employment index had dropped so sharply that the signal was reversed. This unfavorable development, taken together with the favorable September figure for the Commerce Department's leading index, underlines the tentative nature of the initial signal in the three-signal system. Although the system is designed to cope with uncertainties, the current situation offers a reminder that it cannot eliminate them.

ECONOMIC INDICATORS

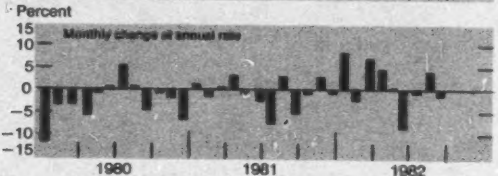
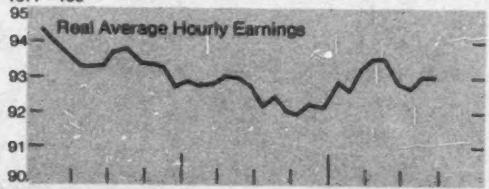
1967 = 100



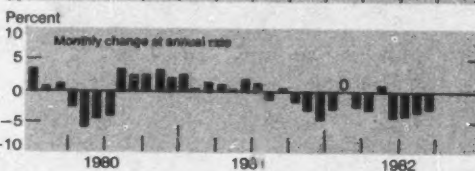
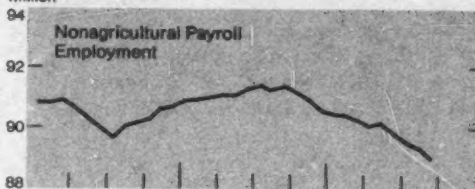
Percent



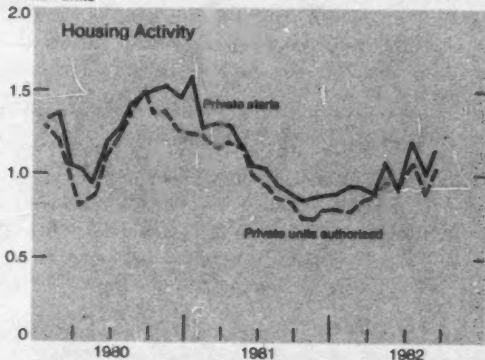
1977 = 100



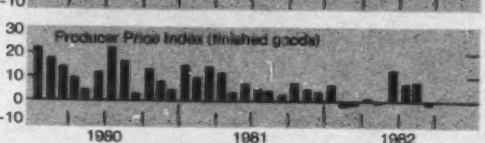
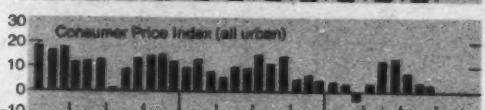
Million



Million units



Percent



NOTE: All data are seasonally adjusted. Hourly earnings are adjusted for overtime in manufacturing and for interindustry employment shifts.

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